

REMARKS

Claims 1, 13, 22, 27, 29, 30, 32, 36, and 39 have been amended. Claims 22, 27, and 36 have been canceled without prejudice. Claims 1-8, 10-18, 20-22, 24, 26-30, 32-34, 36, and 39-43 remain in the application for consideration. In 5 view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application.

Request for Examiner Communication

Applicant has amended the claims as set forth above and described below 10 in an effort to meaningfully advance prosecution. Applicant requests that the Office contact the undersigned prior to issuing a subsequent Office Action.

Claim Objections

Claims 29 and 30 stand objected to for lacking antecedent basis for the 15 element “the job representation”. Applicant has amended claims 29 and 30 by replacing the term “the job representation” with the term “the ordered series of steps”. As such, Applicant requests that the objection of claims 29 and 30 be withdrawn.

§ 101 Rejections

Claims 39-43 stand rejected under 35 U.S.C. § 101 as being directed to 20 non-statutory subject matter. Applicant has amended claim 39 to recite that the controller is “stored on one or more computer-readable storage media”. As such, Applicant requests that the 35 U.S.C. § 101 rejection of claims 39-43 be 25 withdrawn.

§ 102 Rejections

Claims 1-4, 6-8, 10-13, 15-18, 20-24, 26-34, 36, and 37 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,976,062 to Denby et al. (“Denby”).

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§ 103 Rejections

Claims 5 and 14 stand rejected under §103(a) as being unpatentable over Denby in view of U.S. Publication No. 2002/0191014 to Hsieh et al. (“Hsieh”).

10 Claims 39-43 stand rejected under §103(a) as being unpatentable over Denby in view of U.S. Patent No. 6,421,777 to Pierre-Louis et al. (“Pierre-Louis”).

The Claims

15 **Claim 1** has been amended, and as amended, recites a method, implemented in a device, the method comprising (added language appears in bold italics):

- 20 • obtaining a task sequence at the device that describes a set of one or more steps to be carried out in managing multiple additional devices;
- 25 • generating a job tree at the device representing the set of one or more steps, the set of one or more steps ***configured to perform*** at least one of:
 - configuring firmware of the multiple additional devices;
 - downloading an operating system to the multiple additional devices;
 - rebooting the multiple additional devices; or
 - configuring the operating system of the multiple additional devices; and
- 30 • sending one or more commands configured to carry out the set of one or more steps in accordance with the job tree, ***wherein the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple devices, and***

are configured to carry out at least one of the one or more steps concurrently for the multiple devices.

Claim 1 stands rejected as being anticipated by Denby. In the interest of 5 advancing prosecution and without conceding the propriety of the rejection, Applicant has amended claim 1 to recite that *“the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple devices, and are configured to carry out at least one of the one or more steps concurrently for the multiple devices”*. Support for this amendment 10 can be found throughout Applicant’s specification, and at least at paragraphs 0074 and 0075 of Applicant’s specification which are reproduced below for the convenience of the Office:

15 **Applicant’s Specification, Paragraphs 0074 and 0075**
In certain embodiments, when operating systems are being deployed to multiple target devices at approximately the same time, the acts of Figs. 5a-5f up to downloading of the image file (e.g., acts 302 – 362) are performed asynchronously, while the image file is downloaded to multiple target devices in parallel or concurrently. After the image file is downloaded, the 20 acts of Figs. 5a-5f can be continued asynchronously for the multiple target devices. Downloading the image file to multiple target devices in parallel refers to sending the data so that the same data is received by the multiple target devices. This parallel downloading may be accomplished by multicasting the data to the multiple target devices.

25 *By performing a portion of the deployment process asynchronously and another portion of the deployment process in parallel, the efficiency of the use of the network can be improved.* Deploying the operating systems to multiple target devices involves transferring data from the automated deployment service to the target devices. Some portions of this data can be transferred asynchronously, while other portions of this data can be transferred in parallel or concurrently. For example, the amount of data transferred over the network when the image file is downloaded is typically 30 much larger than the amount of data transferred over the network at other times (e.g., downloading of the network boot program or the deployment agent). Thus, the operating systems can be deployed out of lock-step up 35

until the point where the large data transfer is to occur, at which point the multiple target devices are in lock-step.

Applicant submits that Denby does not disclose or in any way suggest that

5 *“the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple devices, and are configured to carry out at least one of the one or more steps concurrently for the multiple devices”*, as recited in claim 1 as amended. More specifically, while Denby briefly mentions “simultaneous upgrades” (Denby, column 2, line 9), Denby does not
10 disclose or suggest carrying out “one of the one or more steps asynchronously” and “one of the one or more steps concurrently”, as recited in claim 1 as amended.

Accordingly, for at least the reasons discussed above, claim 1 is in condition for allowance.

Claims 2-8 and 10-12 depend from claim 1 and thus are allowable as

15 depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 1, are neither disclosed nor suggested by the references of record.

Claim 13 has been amended, and as amended, recites one or more computer readable storage media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to (added language appears in bold italics):

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- receive a user-defined task sequence;
- convert the user-defined task sequence into an ordered series of steps, the ordered series of steps *configured to perform* at least one of:
 - configuring firmware on multiple devices;
 - downloading an operating system to the multiple devices;
 - rebooting the multiple devices; or
 - configuring the operating system of the multiple devices; and
- send one or more commands configured to perform the series of steps in managing the multiple devices over a network in accordance with their order, *wherein the one or more commands*

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are configured to perform at least one of the series of steps asynchronously for the multiple devices and are configured to perform at least one of the series of steps concurrently for the multiple devices.

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Claim 13 stands rejected as being anticipated by Denby. Applicant has amended claim 13 to recite that “*the one or more commands are configured to perform at least one of the series of steps asynchronously for the multiple devices and are configured to perform at least one of the series of steps concurrently for the multiple devices*”. Support for this amendment can be found throughout Applicant’s specification, and at least at paragraphs 0074 and 0075 of Applicant’s specification. While Denby briefly mentions “simultaneous upgrades” (Denby, column 2, line 9), Denby does not disclose or suggest performing “at least one of the series of steps asynchronously” and “at least one of the series of steps concurrently”, as recited in claim 13 as amended.

Accordingly, for at least the reasons discussed above, claim 13 is in condition for allowance.

Claims 14-18, 20, and 21 depend from claim 13 and thus are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 13, are neither disclosed nor suggested by the references of record.

Claim 22 has been amended, and as amended, recites a method implemented in a device, the method comprising (added language appears in bold italics):

- 25 • obtaining a user-defined task sequence at the device that describes actions to be carried out *to automatically deploy an operating system to* multiple additional devices;
- converting, at the device, the user-defined task sequence to a set of one or more steps of a job to be carried out *to automatically deploy the operating system to* the multiple additional devices, the set of one or more steps comprising:
 - 30 ○ configuring firmware of the multiple additional devices;

- downloading an operating system to the multiple additional devices *by copying an operating system image file to the multiple additional devices*;
- rebooting the multiple additional devices; *and*
- configuring the operating system of the multiple additional devices; *and*
- sending one or more commands configured to carry out the one or more steps of the job, *wherein the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple additional devices, and are configured to copy the operating system image file to the multiple additional devices concurrently*.

Claim 22 stands rejected as being anticipated by Denby. Applicant has amended claim 22 to recite "converting, at the device, the user-defined task sequence to a set of one or more steps of a job to be carried out *to automatically deploy the operating system to* the multiple additional devices". Additionally, Applicant has amended claim 22 to recite "downloading an operating system to the multiple additional devices *by copying an operating system image file to the multiple additional devices*". Additionally, Applicant has amended claim 22 to recite that "*the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple additional devices, and are configured to copy the operating system image file to the multiple additional devices concurrently*".

Support for these amendments can be found throughout Applicant's specification, and at least at paragraphs 0074 and 0075 of Applicant's specification which describes, in pertinent part, that "in certain embodiments, when operating systems are being deployed to multiple target devices at approximately the same time, the acts of Figs. 5a-5f up to downloading of the image file (e.g., acts 302 – 362) are performed *asynchronously, while the image file is downloaded to multiple target devices in parallel or concurrently*". Denby does not teach or suggest "downloading an operating system to the multiple additional devices *by copying an operating system image file to the multiple*

5 *additional devices*", as recited in claim 22 as amended. Furthermore, while Denby briefly mentions "simultaneous upgrades" (Denby, column 2, line 9), Denby does not disclose or suggest one or more commands that are configured to carry out *"at least one of the one or more steps asynchronously for the multiple additional devices"* and are *"configured to copy the operating system image file to the multiple additional devices concurrently"*, as recited in claim 22 as amended.

Accordingly, for at least the reasons discussed above, claim 22 is in condition for allowance.

10 **Claims 24 and 26** depend from claim 22 and thus are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 22, are neither disclosed nor suggested by the references of record.

15 **Claim 27** has been amended, and as amended, recites one or more computer readable storage media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to (added language appears in bold italics):

- 20 • obtain a user-selected task sequence;
- convert the user-selected task sequence into an ordered series of steps, the ordered series of steps *configured to automatically deploy an operating system to multiple devices, the ordered series of steps* comprising:
 - 25 ○ configuring firmware of multiple devices;
 - downloading an operating system to the multiple devices;
 - rebooting the multiple devices; *and*
 - configuring the operating system of the multiple devices; *and*
- 30 • send one or more commands configured to perform the series of steps *to automatically deploy the operating system to the multiple devices over a network in accordance with their order, wherein the one or more commands are configured to perform at least one of the series of steps asynchronously for the multiple devices and are configured to perform the step of downloading the operating system to the multiple devices in parallel.*

Claim 27 stands rejected as being anticipated by Denby. Applicant has amended claim 27 to recite “the ordered series of steps *configured to automatically deploy an operating system to multiple devices*”. Additionally, Applicant has amended claim 27 to recite “*the one or more commands are*

5 *configured to perform at least one of the series of steps asynchronously for the multiple devices and are configured to perform the step of downloading the operating system to the multiple devices in parallel*”.

Support for these amendments can be found throughout Applicant’s specification, and at least at paragraphs 0074 and 0075 of Applicant’s

10 specification. While Denby briefly mentions “simultaneous upgrades” (Denby, column 2, line 9), Denby does not disclose or suggest one or more commands that are “*configured to perform at least one of the series of steps asynchronously for the multiple devices*” and that are “*configured to perform the step of downloading the operating system to the multiple devices in parallel*”, as recited 15 in claim 27 as amended.

Accordingly, for at least the reasons discussed above, claim 27 is in condition for allowance.

20 **Claims 28-30 and 32-34** depend from claim 27 and thus are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 27, are neither disclosed nor suggested by the references of record.

Claim 36 has been amended, and as amended, recites a system comprising (added language appears in bold italics):

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- a processor; and
- a memory embodying instructions configured to:
 - obtain a task sequence that describes a set of one or more steps to be carried out *to automatically deploy an operating system to* multiple devices;
 - generate a job representation of the set of one or more steps, the set of one or more steps comprising:

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 - configuring firmware of the multiple devices;
 - downloading an operating system to the multiple devices *by copying an operating system image file to the multiple additional devices;*
 - rebooting the multiple devices; *and*
 - configuring the operating system of the multiple devices; *and*
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 - send one or more commands configured to carry out the set of one or more steps in accordance with the job representation, *wherein the one or more commands are configured to carry out the steps of configuring firmware, rebooting, and configuring the operating system asynchronously for the multiple devices, and are configured to copy the operating system image file to the multiple devices concurrently.*
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Claim 36 stands rejected as being anticipated by Denby. Applicant has amended claim 36 to recite a “set of one or more steps to be carried out *to automatically deploy an operating system to* multiple devices”. Additionally, 20 Applicant has amended claim 36 to recite “downloading an operating system to the multiple devices *by copying an operating system image file to the multiple additional devices*”. Additionally, Applicant has amended claim 36 to recite “*the one or more commands are configured to carry out the steps of configuring firmware, rebooting, and configuring the operating system asynchronously for the multiple devices, and are configured to copy the operating system image file to the multiple additional devices concurrently*”. 25

Support for these amendments can be found throughout Applicant's specification, and at least at paragraphs 0074 and 0075 of Applicant's specification. Denby does not teach or suggest "downloading an operating system to the multiple devices *by copying an operating system image file to the multiple additional devices*", as recited in claim 36 as amended. Furthermore, while Denby briefly mentions "simultaneous upgrades" (Denby, column 2, line 9), Denby does not disclose or suggest one or more commands that are "*configured to carry out the steps of configuring firmware, rebooting, and configuring the operating system*".

system asynchronously for the multiple devices" and that are "configured to copy the operating system image file to the multiple additional devices concurrently", as recited in claim 36 as amended.

Accordingly, for at least the reasons discussed above, claim 36 is in 5 condition for allowance.

Claim 39 has been amended, and as amended, recites a system comprising (added language appears in bold italics):

- 10 • a controller, *stored on one or more computer-readable storage media* configured to be implemented at least in part by at least one of one or more processors to obtain a task sequence that describes one or more steps to be performed on multiple remote devices, and to generate a job representation of the one or more steps, the one or more steps *configured to perform* at least one of:
 - 15 ○ configuring firmware of the multiple remote devices;
 - downloading an operating system to the multiple remote devices;
 - rebooting the multiple remote devices; or
 - configuring the operating system of the multiple remote devices; and
- 20 • a network boot service, configured to be implemented at least in part by at least one of the one or more processors to detect when the multiple remote devices are coupled to a network that the system is also coupled to, and to communicate with the controller to determine which of the steps of the job representation are to be carried out in response to the detection, *wherein at least one of the one or more steps are configured to be carried out asynchronously for the multiple remote devices, and at least one of the one or more steps are configured to be carried out concurrently for the multiple remote devices.*
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Claim 39 stands rejected as being anticipated by Denby. Applicant has amended claim 39 to recite that "*at least one of the one or more steps are configured to be carried out asynchronously for the multiple remote devices, and at least one of the one or more steps are configured to be carried out concurrently for the multiple remote devices*". Support for this amendment can 35

be found throughout Applicant's specification, and at least at paragraphs 0074 and 0075 of Applicant's specification. While Denby briefly mentions "simultaneous upgrades" (Denby, column 2, line 9), Denby does not disclose or suggest that "at least one of the one or more steps are configured to be carried out asynchronously" 5 and "at least one of the one or more steps are configured to be carried out concurrently", as recited in claim 39 as amended.

Accordingly, for at least the reasons discussed above, claim 39 is in condition for allowance.

10 **Claims 40-43** depend from claim 39 and thus are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 39, are neither disclosed nor suggested by the references of record.

Conclusion

15 All of the claims are in condition for allowance. Accordingly, Applicant requests reconsideration and issuance of a Notice of Allowability. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

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Respectfully Submitted,

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